

**What's new in homeless health care?
A no-jargon summary of the latest research**

I. Health status
Travis Baggett

Population-Level Health Effects of Involuntary Displacement of People Experiencing Unsheltered Homelessness Who Inject Drugs in US Cities

Barocas JA, Nall SK, Axelrath S, Pladsen C, Boyer A, Kral AH, Meehan AA, Savinkina A, Peery D, Bien M, Agnew-Brune C, Goldshear J, Chiang J, Linas BP, Gonsalves G, Bluthenthal RN, Mosites E; NHBS Study Group
JAMA 2023;329(17):1478-1486

Summary: The authors developed a computer simulation model to estimate the impact of involuntary displacement (i.e. “sweeps” or “clearings”) on the health of people experiencing unsheltered homelessness who inject drugs in 23 US cities over a 10-year time horizon. The model projected that involuntary displacement, as compared to a scenario of no displacement, would produce an estimated 974 – 2,175 additional overdose deaths per 10,000 people, representing a 71 – 94% increase in overdose mortality. Other model projections included 611 – 1,360 additional hospitalizations per 10,000 people and 3,140 – 8,812 fewer initiations of medication for opioid use disorder per 10,000 people for the displacement scenario relative to no displacement. When considering all-cause mortality, displacement was projected to contribute 15.6-24.4% additional deaths from any cause.

Why we chose this paper: The authors used sophisticated modeling methods to project the health impacts of a controversial policy strategy that is currently playing out in many US cities. Although subject to the limitations of any computer modeling study, the findings point toward a clear signal of harm for those being displaced and have important and timely policy implications that should prompt consideration of alternative strategies for addressing the needs of this highly marginalized subgroup of people experiencing homelessness.

Related paper:

Goldshear JL, Kitonga N, Angelo N, Cowan A, Henwood BF, Bluthenthal RN. "Notice of major cleaning": A qualitative study of the negative impact of encampment sweeps on the ontological security of unhoused people who use drugs. *Soc Sci Med* 2023;339:116408.

The Association of Homelessness with Rates of Diabetes Complications: A Population-Based Cohort Study

Sharan R, Wiens K, Ronksley PE, Hwang SW, Booth GL, Austin PC, Spackman E, Bai L, Campbell DJT
Diabetes Care 2023;46(8):1469-1476

Summary: The authors conducted a study of 5,219 people experiencing homelessness with diabetes (mean age 55 years, 67.7% male, 97.6% type 2) in Ontario, Canada from 2006 to 2019 and compared them to 5,219 non-homeless control patients with diabetes matched on several characteristics. During longitudinal follow-up, the homeless cohort had an 85% higher rate of macrovascular complications, including a 26% higher rate of heart attack, 41% higher rate of stroke, 78% higher rate of heart failure, and 192% higher rate of peripheral arterial disease. Despite experiencing higher rates of cardiac complications, the homeless cohort was 24% less likely to undergo coronary revascularization. Rates of hospitalization for diabetic ketoacidosis (DKA), non-DKA hyperglycemia, and hypoglycemia were 5.6, 2.7, and 2.6 times higher than in the non-homeless cohort, respectively. Rates of skin and soft tissue infections and amputations were also significantly higher in the homeless vs. non-homeless cohort. The pattern of findings was generally similar when all analyses were repeated with low-income people with diabetes as the matched control group.

Why we chose this paper: This is the most comprehensive and compelling epidemiologic study to date of diabetes complications among people experiencing homelessness. The findings confirm what many HCH clinicians already know but had not yet been clearly demonstrated in the scientific literature: that homeless

patients with diabetes often fare much worse than their housed counterparts with respect to the health outcomes of this complex chronic illness that is exceptionally difficult to manage when unhoused. The related paper listed below uses the same cohort to demonstrate an increased risk of all-cause, cardiovascular, and non-cardiovascular mortality relative to non-homeless controls emerging as early as 2 years after the index (initial) observation.

Related paper:

Wiens K, Bai L, Austin PC, Ronksley PE, Hwang SW, Spackman E, Booth GL, Campbell DJT. Long-term association between homelessness and mortality among people with Diabetes. *Lancet Diabetes Endocrinol* 2023;11(4):229-231.

The Prevalence of Problem Gambling and Gambling Disorder Among Homeless People: A Systematic Review and Meta-Analysis

Deutscher K, Gutwinski S, Bempohl F, Bowden-Jones H, Fazel S, Schreiter S
J Gambli Stud 2023;39(2):467-482

Summary: The authors conducted a systematic review and meta-analysis of studies describing the prevalence of problem gambling (PG) or gambling disorder (GD) among people experiencing homelessness. They identified 8 studies from 5 countries (2 US, 2 Canada, 2 UK, 1 Japan, 1 Poland). Across these 8 studies (encompassing 1,938 homeless individuals), the prevalence of PG/GD ranged from 11.3% to 31.3%, with a weighted mean of 18.0%. Among the 4 studies with higher methodologic quality and lower risk of bias, the weighted mean was 13.4%. Six studies additionally identified sizeable percentages of people (11.6 – 56.4%) with subclinical/subthreshold levels of at-risk gambling behavior.

Why we chose this paper: A growing number of studies have identified gambling as a potentially sizeable issue in this patient population. This systematic review and meta-analysis elevates the level of evidence on this topic, demonstrating a prevalence of gambling disorder among people experiencing homelessness that is substantially higher than in the general population (e.g. ~0.3% in the US and Canada). Given the potential financial and health impacts of gambling disorder, consideration should be given to more routine screening for this underrecognized condition in homeless health care settings.

Related paper:

Stefanovics EA, Potenza MN, Tsai J. Prevalence and Clinical Characteristics of Recreational and At-Risk/Problematic Gambling Among Low-Income U.S. Veterans: Results from the National Veteran Homeless and Other Poverty Experiences (NV-HOPE) Study. *J Gambli Stud* 2023 Sep 26.

Stefanovics EA, Potenza MN, Szymkowiak D, Tsai J. Chronically homeless veterans with gambling disorder: Epidemiology, clinical correlates, and traumatic experiences. *J Psychiatr Res* 2023;164:118-124.

Homelessness and Incidence and Causes of Sudden Death: Data from the POST SCD Study

Haghighat L, Ramakrishna S, Salazar JW, Feng J, Chiang J, Moffatt E, Tseng ZH
JAMA Intern Med 2023;183(12):1306-1314

Summary: The authors used data from a registry of 868 cases of presumed sudden cardiac death (SCD) that occurred in San Francisco in 2011 – 2018 to compare the rates and underlying causes of these deaths for unhoused vs. housed individuals. They found that unhoused individuals had 16-fold higher rates of presumed SCD; however, autopsy showed that 63.6% these deaths were actually due to non-cardiac causes, with occult overdose being the leading contributor at 31.8% of all deaths (vs. 12.6% among housed decedents). Despite only one-third of presumed SCDs among homeless individuals being due to autopsy-confirmed cardiac arrhythmic causes, the rate of such deaths was still 7-fold higher than in housed individuals, with chronic coronary artery disease and cardiomyopathy (particularly alcohol- and/or drug-induced cardiomyopathy) being the most common underlying causes of the latter.

Why we chose this paper: These findings add a new dimension to the ever-growing literature on excess mortality among people experiencing homelessness by examining the understudied topic of SCD, which is often defined on clinical grounds. With the benefit of autopsy data, this study demonstrates that about two-

thirds of “presumed SCD” among people experiencing homelessness are actually sudden deaths due to noncardiac causes, with occult overdose being the leading contributor. Nevertheless, rates of sudden arrhythmic death are also substantially higher in this population than in housed individuals. Findings underscore the myriad cardiac and non-cardiac health and mortality disparities experienced by people experiencing homelessness.

Related papers:

Dickins KA, Fine DR, Adams LD, Horick NK, Lewis E, Looby SE, Baggett TP. Mortality Trends Among Adults Experiencing Homelessness in Boston, Massachusetts from 2003 to 2018. *JAMA Intern Med* 2023;183(5):488-490.

Fine DR, Dickins KA, Adams LD, Horick NK, Critchley N, Hart K, Gaeta JM, Lewis E, Looby SE, Baggett TP. Mortality by Age, Gender, and Race and Ethnicity in People Experiencing Homelessness in Boston, Massachusetts. *JAMA Netw Open* 2023;6(8):e2331004.

Trends, Characteristics, and Maternal Morbidity Associated with Unhoused Status in Pregnancy

Green JM, Fabricant SP, Duval CJ, Panchal VR, Cahoon SS, Mandelbaum RS, Ouzounian JG, Wright JD, Matsuo K

JAMA Netw Open 2023;6(7):e2326352

Summary: The authors analyzed data from a nationwide sample of more than 18 million hospital deliveries in the US between 2016 and 2020 to examine the association between housing status and delivery outcomes. Over the 5-year study period, the prevalence of pregnant patients experiencing homelessness at the time of delivery increased 72%, from 1 in 1,314 deliveries in 2016 to 1 in 764 deliveries in 2020. Unhoused pregnant patients were more likely to have substance use disorders, various mental health disorders, sexually transmitted infections, gestational hypertension and preeclampsia, excess maternal weight gain, intrauterine fetal demise, placental abruption, and placenta accreta spectrum. In analyses controlling for multiple variables, unhoused status at delivery was associated with 2.3 times higher odds of severe maternal morbidity (as defined by CDC criteria), 2.5 to 3 times higher odds of preterm, early preterm, or extreme preterm delivery, 3.8 times higher odds of a ≥ 7 -day hospital stay, and 10 times higher odds of in-hospital death.

Why we chose this paper: This picture leverages national data to paint a detailed – and alarming – picture of maternal and fetal outcomes associated with unhoused status at the time of delivery. Although causality of the associations cannot be inferred from these cross-sectional data, the findings nevertheless illustrate the dire need for interventions to improve health outcomes among pregnant people experiencing homelessness.

Related paper:

Huang K, Waken RJ, Luke AA, Carter EB, Lindley KJ, Joynt Maddox KE. Risk of delivery complications among pregnant people experiencing housing insecurity. *Am J Obstet Gynecol MFM* 2023;5(2):100819.

II. Health care delivery

Kate Diaz Vickery

Providing Low-barrier Addiction Treatment Via a Telemedicine Consultation Service During the COVID-19 Pandemic in Los Angeles, County: An Assessment 1 Year Later

Kennedy AJ, George JS, Rossetti G, Brown CO, Ragins K, Dadiomov D, Trotzky-Sirr R, Sanchez G, Llamas H, Hurley B

J Addict Med 2023;17(1):e64-e66

Summary: This paper describes a retrospective evaluation of the Los Angeles County telephone consult line for providers and outreach workers to connect their clients/patients with medication-assisted treatment (MAT) for substance use during the COVID-19 pandemic (March 2020-March 2021). Eleven providers logged 713 calls serving 557 unique patients. Patients were largely male (75%), 41%

Latino, and 49% experiencing homelessness. Most had Medical Assistance (77%) but 20% were uninsured. Medications provided included buprenorphine-naloxone (90%), followed by nicotine replacement therapy (5.3%), naltrexone (4.2%), and buprenorphine monotherapy (1.8%).

Why we chose this paper: This paper offers unique insight and details about the feasibility of a telehealth solution aimed to offer low-barrier MAT during the pandemic.

Continuity of primary care among homeless adults with mental illness who received a housing and mental health intervention

To MJ, Mejia-Lancheros C, Lachaud J, Hwang SW
Fam Pract. 2023. doi: 10.1093/fampra/cmadv023

Summary: This study assessed the level of continuity of primary care (CPC) and changes in CPC over 6 years among adults with experience of homelessness and mental illness who received a Housing First intervention at the Toronto site of the At Home/Chez Soi study. They found low levels of CPC in both the intensive case management (68-74%, n=193) and assertive community treatment (63-78%, n=87) groups over the study period.

Why we chose this study: This is one of the latest papers to emerge from the largest study of Housing First and emphasizes the importance of continuity of primary care, an important yet understudied component of health care.

Quality of Depression Care for Veterans Affairs Primary Care Patients with Experiences of Homelessness

Jones AL, Chu K, Rose DE, Gelberg L, Kertesz SG, Gordon AJ, Wells KB, Leung L.
J Gen Intern Med 2023;38(11):2436-2444

Summary: This study assessed whether people experiencing homelessness in homeless-tailored primary care settings received higher quality of depression care compared to people experiencing homelessness in usual VA primary care among a cohort of VA primary care patients from 2016-2019. They found homeless-tailored primary care outperformed usual care with regard to measures of timeliness of follow-up with multidisciplinary primary care providers.

Why we chose this paper: This paper contains some of the many interesting learnings emerging from the VA's investment in housing, clinical care, and research to end Veteran homelessness. It also encapsulates useful quality of care metrics for integrated primary care-behavioral health teams that jointly manage depression.

Homelessness in the Perinatal Period and Associations With Reproductive Interconception Care: 2016-2019 Pregnancy Risk Assessment Monitoring System

Galvin AM, Lewis MA, Walters ST, Thompson EL
Public Health Rep 2023;333549231204658

Summary: This paper examines how care between pregnancies varies between women who did and did not experience homelessness in the perinatal period using Pregnancy Risk Assessment Monitoring System data from 2016-2019. Perinatal homelessness was significantly associated with a lower prevalence of attending a postpartum maternal visit and a higher prevalence of having a conversation about birth intervals with their health care providers.

Why we chose this paper: This study takes important steps to examine the reproductive health needs of women who experience homelessness. This is an understudied topic that may become more complex with the changing landscape of care access since the repeal of Roe v. Wade.

Housing Status, Cancer Care, and Associated Outcomes Among US Veterans

Decker HC, Graham LA, Titan A, Kanzaria HK, Hawn MT, Kushel M, Wick E
JAMA Netw Open 2023;6(12):e2349143

Summary: This paper characterizes the diagnosis, treatment, surgical outcomes, and mortality by housing status of more than 109,000 patients who received care from the US Department of Veterans Affairs (VA) health system for colorectal, breast, or lung cancer from 2011-2020. They include patients who had homeless indicators in the 12 months prior to diagnosis. Most (68%) participants had lung cancer, 26% had colorectal cancer, and 6% had breast cancer. There were 5356 veterans (5%) experiencing homelessness, and these individuals more commonly presented with stage IV (advanced) colorectal cancer than veterans with housing (22% vs 19%). Patients experiencing homelessness had longer postoperative lengths of stay for all cancer types but no differences in other treatment or surgical outcomes were observed.

Why we chose this paper: This is one of the largest studies of cancer care among people experiencing homelessness. It provides important summary data about cancer. The lack of difference in mortality among people who experience homelessness suggests that VA care may offer important support to reduce cancer mortality inequities seen in other studies.

III. Interventions

Alaina Boyer

The policy case for designating EMS teams for vulnerable patient populations: Evidence from an intervention in Boston

Brennan M, Dyer S, Jonasson J, Salvia J, Segal L, Serino E, Steil J
Health Care Manag Sci 2024;27(1):72-87

Summary: This publication describes the impact of a specialized non-transport emergency medical services (EMS) squad model of care in Boston, MA. This specialized “Community Assistance Team” – also known as “Squad 80” – responded to 9-1-1 caller requests for well-being assessments of individuals observed outside, many of whom were experiencing homelessness, mental health issues, and/or addiction. The squad was trained to provide point of care services and offer alternatives to emergency department transport when appropriate. Evaluation of the program demonstrated lower rates of transport to emergency rooms, increased referrals to recovery services or other community support services, and a reduced burden on ambulance capacity for other urgent calls.

Why we chose this paper: This paper illustrates how an innovative EMS intervention produced evidence to fuel a policy change in emergency services care delivery with downstream effects on emergency room diversion. It provides a real-world example of the importance of translating intervention evidence into action.

Related paper:

Labriola MM, Sobol D, Sims H, Holliday SB. Implementation and Outcome Evaluation of LA DOOR: A Proposition 47-Funded Program in Los Angeles: Cohort 2 Final Evaluation Report. *Rand Health Q* 2023;10(4):4.

Expanding the evidence for cross-sector collaboration in implementation science: creating a collaborative, cross-sector, interagency, multidisciplinary team to serve patients experiencing homelessness and medical complexity at hospital discharge

Anderson AJ, Noyes K, Hewner S
Front Health Serv 2023;3:1124054

Summary: The authors describe the development of a cross-sector, interagency, multidisciplinary team – known as the Buffalo City Mission Recuperative Care Collaborative – to facilitate the implementation of a new medical respite unit at Buffalo’s largest homeless shelter. This team met on a regular basis and consisted of representatives from a homeless services agency, a primary care organization, an academic partner, insurance providers, a community pharmacy, a home health care agency, a behavioral health agency, and an acute care hospital. Team meetings, along with informational interviews of individual members, identified implementation barriers and facilitators and utilized an

implementation science framework to delineate implementation strategies. Identified barriers included differing organizational cultures across sectors, disparate visions, and workforce turnover. Facilitators included clear group composition, academic partnerships, and strategic linkages to acute care hospitals. The authors emphasize the importance of having a clearly defined shared mission when embarking on a community-based implementation project requiring interagency collaboration.

Why we chose this paper: Hospital discharge for persons experiencing homelessness with highly complex needs can be challenging. Medical respite is a useful model for addressing these complex needs, but implementing a new respite program requires careful coordination across disciplines and sectors. This publication highlights the need for developing a shared vision and corresponding workflow to facilitate this implementation, in addition to outcome measures that go beyond readmissions and more fully capture the impact of respite across the care continuum.

Exploratory assessment: Nurse-led community health worker delivered HCV intervention for people experiencing homelessness

Nyamathi A, Salem BE, Lee D, Yu Z, Hudson A, Saab S, Shin SS, Jones-Patten A, Yadav K, Alikhani M, Clarke R, Chang A, White K, Gelberg L
Public Health Nurs 2023;40(5):641-654

Summary: The authors conducted a pilot randomized controlled trial in the Skid Row area of Los Angeles to test the efficacy of a nurse (RN) / community health worker (CHW)-led hepatitis C virus (HCV) treatment intervention for people experiencing homelessness. The intervention was based on the Comprehensive Health Seeking and Coping Model, which accounts for several factors that can impact patients' motivations for and response to treatment, including demographic, situational, social, behavioral, and psychological factors. The small sample size (n=10; 4 in the RN/CHW arm and 6 in the clinic-based standard of care arm) meant that statistical tests were generally under-powered to detect differences between groups. Three of the 4 RN/CHW arm participants achieved sustained viral response at 12 weeks, and there was a suggestion of improvement in drug and alcohol use as well as reported access to physical and mental health services in this group.

Why we chose this paper: HCV infection disproportionately impacts people experiencing homelessness, contributing to significant liver-related morbidity and mortality. Pilot intervention trials such as this are crucial first steps in the development of innovative new models of care for this population.

Related paper:

Kherghehpoush S, McKeirnan KC. The role of community pharmacies in the HIV and HCV care continuum. *Explor Res Clin Soc Pharm* 2023;9:100215.

Bridges to Elders: A Program to Improve Outcomes for Older Women Experiencing Homelessness

Flike K, Means RH, Chou J, Shi L, Hayman LL
Health Promot Pract 2023:15248399231192992

Summary: The authors conducted a single-arm intervention trial of the Bridges to Elders (BTE) program among 96 older (age 55+) women experiencing or at risk of homelessness in the Boston area in 2017-2018. The BTE intervention consisted of a nurse practitioner (NP) and community health worker (CHW) dyad that delivered intensive case management services with a goal of improving health and social outcomes. Pre-post analyses demonstrated a 17% increase in stable housing, a 35% increase in primary care access and engagement, and a 47% decrease in uncontrolled chronic illness.

Why we chose this paper: The aging of the homeless population will require more interventions specific to the needs of elders. The findings of this single-arm study suggest that the use of an NP/CHW intervention dyad is an innovative and promising way to address these needs.

Related paper:

Pajka SE, Kushel M, Handley MA, Olsen P, Li B, Enriquez C, Kaplan L, Sudore RL. Using behavioral theory to adapt advance care planning for homeless-experienced older adults in permanent supportive housing. *J Am Geriatr Soc* 2023;71(8):2615-2626.

Results of a Peer Navigator Program to Address Chronic Illness Among Persons Experiencing Homelessness. J Community Health

Noland DH, Morris CD, Kayser AM, Garver-Apgar CE
J Community Health 2023;48(4):606-615

Summary: The authors report on their 3-year process of developing and implementing a peer navigation program for people experiencing homelessness in Denver. The Collective Impact for High Public Service Utilizers Project proceeded in two phases. During Phase I, the coalition held regular meetings and conducted a comprehensive needs assessment to identify client-level barriers to chronic care, establish core functions for peer navigators, and identify organizational barriers to screening and referral to services. Using a strengths, weaknesses, opportunities, and threats (SWOT) analysis, 4 core duties of the peer navigator were identified: education, advocacy, role modeling, and navigation. In phase II, the peer navigator intervention was implemented. Peer navigators were paid staff with lived experiences similar to those served and were embedded in 5 homeless-serving agencies in the metro Denver area. During the 2-year implementation period, peer navigators engaged 1071 individuals, with 823 getting screened for a chronic condition (cancer, diabetes, cardiovascular disease, and COPD) and 429 referred to health care services. Importantly, patients were motivated to pursue employment after engaging with peer navigators as they were able to see the value of their experience in helping others.

Why we chose this paper: Peer navigators and similar lay health workers (e.g. community health workers, promotoras, etc) are extremely important connectors in building patient trust and elevating patient experience in a complex health care system, especially for vulnerable populations with chronic illnesses. However, these roles can be challenging to create and sustainably fund. More practice-based evidence documenting the impact of these workers on whole-person care and outcomes could help build the case for reimbursement models that recognize the value of these health care personnel.

Related paper:

Vickery KD, Ford BR, Gelberg L, Bonilla Z, Strother E, Gust S, Adair E, Montori VM, Linzer M, Evans MD, Connett J, Heisler M, O'Connor PJ, Busch AM. The development and initial feasibility testing of D-HOMES: a behavioral activation-based intervention for diabetes medication adherence and psychological wellness among people experiencing homelessness. *Front Psychol* 2023;14:1225777.

IV. Housing

Stefan Kertesz

Domestic Violence Housing First Model and Association With Survivors' Housing Stability, Safety, and Well-being Over 2 Years

Sullivan CM, Simmons C, Guerrero M, Farero A, López-Zerón G, Ayeni OO, Chiamonte D, Sprecher M, Fernandez AI
JAMA Network Open 2023;6(6):e2320213.

Summary: Intimate partner violence is a major cause of homelessness and housing instability. It includes violence, abuse, and controlling behavior and can cause long-term harm to health and well-being. A “Domestic Violence Housing First Model” (DVHF) includes survivor-driven housing-inclusive advocacy and flexible funding. The advocacy portion works with survivors to help them achieve housing, at their chosen pace, in a way that matches needs. The funding can cover rent, car repair, employment-related expenses, and safety measures. This study was not randomized, but the full service package was not consistently available due to typical challenges of social service agencies (turnover, resources, etc), so the comparison condition was receipt of “services as usual” (SAU) such as counseling, support groups, and legal referrals. There were 5 agencies in Washington state that participated in the trial (2017-2021) and 406 survivors participated. Measures included a housing instability scale, several distinct types of abuse, depression

(PHQ-9), anxiety (GAD-7), and PTSD. Statistical techniques such as “inverse probability sampling weights” were used to try to deal with any potential imbalance between the DVHF and SAU groups. Rather elaborate statistical models were used to test for differences in outcomes over 24 months. Results showed improvements in domestic violence, housing instability, depression, anxiety, and PTSD severity over time. These improvements were consistently larger for the persons receiving DVHF.

Why we chose this paper: The implication is that agencies serving DV survivors should obtain more funding to permit the intensive advocacy needed to help people get housed.

Related papers:

Baker CK, Niolon PH, Oliphant H. A Descriptive Analysis of Transitional Housing Programs for Survivors of Intimate Partner Violence in the United States. *Violence Against Women* 2009;15(4):460-481.

Sullivan CM, Olsen L. Common ground, complementary approaches: adapting the Housing First model for domestic violence survivors. *Housing and Society* 2016;43(3):182-194.

National Network to End Domestic Violence. 17th Annual Domestic Violence Counts Report. 2023. At: <https://nnedv.org/wp-content/uploads/2023/03/17th-Annual-Domestic-Violence-Counts-Report-Full-Report-March-2023.pdf>

Exploring the effect of case management in homelessness per components: A systematic review of effectiveness and implementation, with meta-analysis and thematic synthesis

Weightman AL, Kelson MJ, Thomas I, Mann MK, Searchfield L, Willis S, Hannigan B, Smith RJ, Cordiner R *Campbell Systematic Reviews*. 2023;19(2):e1329

Summary: The authors conducted a systematic review of studies (1990-2021) to identify the effectiveness of case management programs for people experiencing homelessness and the components most likely to improve housing, health, and other outcomes. They considered several different types, including time-limited low-intensity versions (“brokerage case management”) where someone coordinates services for a large number of people, and more costly long-term models by individuals (“intensive case management”) or teams (“assertive community treatment”) that may serve 15-35 clients at once. They looked for all available quantitative studies with a comparison group (for effectiveness) and qualitative studies on implementation. They considered a wide range of potential client types (people on the streets, people accessing shelters, people with insecure housing). The primary outcome was homelessness, but secondarily they looked at access to health and social services, physical health, mental health, substance use, criminal justice, employment/income, capabilities/well-being (often with quality-of-life survey), and cost effectiveness. They identified 64 distinct intervention studies, including 48 randomized trials and 53 studies from the US. In addition, there were 41 carefully selected qualitative reports on how the interventions were done. The overall effect of case management for homeless outcomes at less than one year was modest and favorable but fell a tad shy of statistical significance. The overall effect of case management for homeless outcomes at more than one year was modest and favorable and reached statistical significance. The effects were larger when the case management was packaged into a Housing First intervention. Outcomes were favorable for “capabilities and wellbeing” but not for any health or substance use outcome. Qualitative factors that influenced more effective case management included housing safety, security and choice, attention to landlord relationships, access to furniture and other resources, transportation, peer mentorship, continuity of care, flexibility and tailored support for the client, support and respect for the case managers, agency partnerships and collaboration across partners, organizational culture, and senior leadership commitment, among many others.

Why we chose this paper: This study shows that many models of case management improve housing outcomes and the well-being of clients who are coming out of homelessness, without impacting mental or physical health. It underscores that there has been an extraordinary amount of work done to understand case management, and it highlights the diverse approaches it can take.

Facilitating exit from encampments: combining low-barrier transitional housing with stabilizing treatment for substance related problems

Komaromy M, Stone A, Peterson A, Gott J, Koenig R, Taylor JL

Addiction Science and Clinical Practice 2023;18(66)

Summary: This report describes the response of Boston Medical Center, in collaboration with the Boston City Mayor and State of Massachusetts, to a complex fixed encampment of persons experiencing homelessness in the area near the hospital known as “Mass and Cass.” Prior efforts at demolition and policing had decreased addiction treatment utilization and did not reduce the encampments. By 2021, the encampment had risen to 336 persons, and there were concerns regarding safety, fires in tents, infectious diseases, opioid overdose, and upset to the public from visible injection drug use and mess. The City contracted with agencies to offer “crisis housing” (which combines aspects of shelter and transitional housing). This included BMC leasing a vacant hotel and operating 60 beds there with no mandatory contingency regarding substance use or treatment engagement. However, the state funded BMC to put acute addiction stabilization services and medication clinics on the ground floor of the same building, including dispensing for methadone. Clinical services were available to people coming from outside the building or in it. The rule was that substance use was prohibited in the building. In this paper the authors, who themselves launched the initiative and ran it, describe their work. They acknowledge a conflict of interest in this report. Staff remained onsite around the clock for safety checks. This included 24/7 security and a metal detector. Harm reduction kits (safer injection kits) were provided. The ratio of case manager to resident was 1:15 and they met regularly. They assisted with preparing for a return to housing including medical stabilization, identity documents, family reunification, and more. Other agencies also visited their clients in the building. The number of partnered agencies available to serve clients was extremely high, ranging from homeless shelters to employment organizations to harm reduction agencies (like an observed monitoring space in another building nearby) and housing agencies. A “bedded outpatient” clinic space could observe people who were over-sedated or over-amped in a recliner chair and treat medical complications for up to 24 hours. This included a 24/7 clinical staff (2 RNs, 1 NP, a harm reduction specialist, and a clerk). A separate walk-in clinic space could initiate opioid and other addiction treatments, manage outpatient withdrawal with methadone or buprenorphine, treat skin and soft tissue infections, test for infectious diseases, address reproductive health, offer pregnancy testing and contraception, and more. In the first 12 months, 100 unsheltered persons were admitted to the facility, including 50 from the encampment. Mean length of stay was 247 days, with 25 transferred to permanent or other long-term housing. Among the 100, 8 were administratively discharged, 4 were incarcerated, and 4 died (2 considered due to overdose). Five housing case managers completed 5,140 visits and referred clients to a wide range of services. In the on-site clinical program, 1,722 patients had 7,468 visits during the first year of operation, including 704 episodes of care in which withdrawal was treated with methadone. Among 641 episodes where the person was not already connected to methadone treatment, 88% were linked to methadone treatment. Of 100 people who resided in the building, 59 of them made 425 visits to the clinical units for a wide range of substance use and medical issues, including complicated pregnancy, endocarditis, and psychiatric hospitalization.

Why we chose this paper: This paper offers an alternative way of responding to encampments of people experiencing homelessness and addiction other than wholesale involuntary displacement or “clearing” – whose ill effects were demonstrated in the 2023 simulation modeling study presented above.

Discrete-event simulation modeling for housing of homeless populations

Singham DI, Lucky J, Reinauer S.

PLoS ONE 2023;18(4): e0284336

Summary: In Alameda County, 13,000 households need help due to homelessness each year. A modeling approach called “discrete-event simulation” allowed the authors to model the long-term queue of people arriving into homelessness, the time they would be homeless, and their exit from homelessness, and to test different investment policies in relation to shelter and permanent housing. They used data in the County system, including the Homeless Management Information System. They ran a simple model (homeless, sheltered, housed) as well as a detailed pathway model that allowed for subgroups such as those who self-resolve homelessness, others who benefit from “rapid rehousing” service, and others needing various

forms of permanent housing. In their model for Alameda County, their base model would unfold from 2023 to 2027, requiring:

- New shelter beds: 2,652 in year 1, maxing at 3,221 in year 2, then declining as the new housing services increase
- New rapid rehousing assistance serving: 1,120 in year 1, maxing out at 2,100 in year 5
- New permanent supportive housing units: 3,351 in year 1, maxing out at 6,914 in year 5
- New dedicated affordable housing units: 1,459 in year 1, maxing out at 9,411 in year 5 (several other categories are incorporated; these are shown as examples)

The total cost would be \$2.5 billion, not including the development or capital costs. In other words, rent subsidies are included here but not the initial cost taken on by a developer via a loan or similar. "Given the current state of Alameda County, almost all resources require large amounts of immediate investment ... even to begin to approach a feasible solution."

Why we chose this paper: This paper may be helpful in explaining the scale of action and investment required to create a functional zero for homelessness in communities currently struggling with high and rising levels of homelessness. The very high initial costs will surprise some. In our view, they also afford a crude estimate of the costs deferred, perhaps over decades, by communities that chose to maximize carefully zoned home ownership and neighborhood quality within limited geographical space without planning for downstream consequences.

Examination of bidirectional associations between neurocognitive functioning and housing stability in homeless adults: A longitudinal subgroup analysis of the at Home/Chez Soi study

Gicas KM, Blumberg MJ, Terao CM, Mejia-Lancheros C, Nisenbaum R, Hwang SW, Stergiopoulos V
Neuropsychology 2023;37(2):157-165

Summary: The authors examined 6 years of follow-up data for 283 people who entered a Housing First trial in Toronto, Canada in 2009-2011 and subsequently underwent sequential standardized cognitive evaluations and assessments of housing status. Over half of participants had a psychotic disorder, and nearly half had drug and alcohol use disorders. On the one hand, achieving housing stability was not associated with better performance on any of the cognitive tests. On the other hand, better learning and memory function was associated with 66% improved odds of achieving housing stability in the subsequent 3 months in analyses controlling for study arm and psychological disorders.

Why We Chose this Paper: This is the first study to demonstrate that memory functioning is a contributor to housing stability. Stability in housing is a high priority for permanent supportive housing policies. Physical and mental health challenges are one part to be addressed. This study suggests that a person's ability to learn and remember will also affect their success in housing. This is something clinicians can assess and help with over time.

Related paper:

Stergiopoulos et al. Housing Stability and Neurocognitive Functioning in Homeless Adults with Mental Illness: A Subgroup Analysis of the At Home/Chez Soi Study. *Frontiers in Psychiatry* 2019. (This study found that roughly 70% of persons entering the At Home/Chez Soi supportive housing trial had significant cognitive impairment and that achieving residential stability was not associated with improvement in it.)